REMARKS

Status of the Claims

Claims 11–16 and 22–31 are pending. Claims 11, 13–14, 24 are amended. Claim 24–31 are new. Claims 11, 13, 14, and 22–26 are rejected, and claims 12, 15, and 16 were acknowledged as claiming allowable subject matter. Applicants reserve their right to file one or more divisional applications to the canceled subject matter. No new matter is added. Support for the amendments may be found throughout the application as originally filed.

Rejection Under 35 U.S.C. § 102

Claims 24–26 stand rejected under 35 U.S.C. § 102(b) as being anticipated by JP 09-059258 ("JP '258"). Applicant has amended claims 24 to distinguish the compounds disclosed in JP '258. Specifically, claim 24 has been amended to recite that "A is a three to six carbon atom chain which together with the thiazole ring can form a 5,6-dihydro-4H-cyclopentathiazole, 4,5,6,7-tetrahydrobenzothiazole, 5,6,7,8-tetrahydro-4H-cycloheptathiazole, or 6,7-dihydro-4H-pyrano[4,3-d]thiazole skeleton." Claims 25–26 depend from claim 24, and therefore also include this structural limitation. JP '258 does not disclosed any compounds which meet the structural requirements of claims 24–26. Accordingly, claims 24–26 are not anticipated by JP '258.

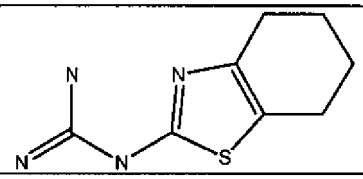
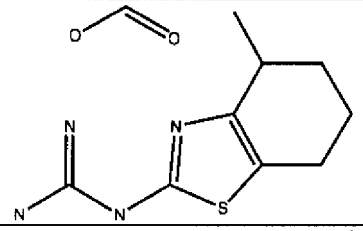
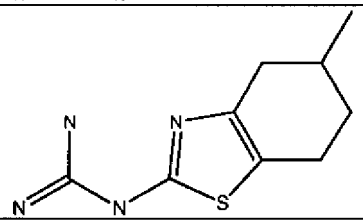
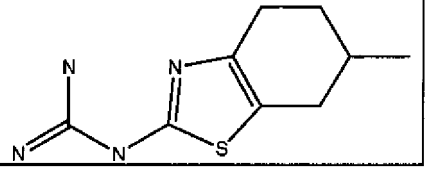
Rejection Under 35 U.S.C. § 103

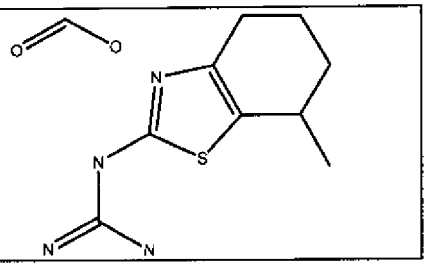
Claims 11, 13–14, and 22–23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ann. Rep. Takeda Res. Lab., 27, pp 96–111, by Usui. The examiner notes that "instant claim 11 consists of a 3–6 carbon chain, which is substituted with atleast [sic] one methyl group." (Office Action at 8.) With respect to Usui, the examiner states that the only difference between the present claims and Usui is that "for the instant claim, ring A has atleast [sic] a methyl substituent." (*Id.*) The examiner concludes that "due to the structural similarities between the groups, and that the groups are homologues of each other . . . the instantly claimed mono-methyl substituted compounds of formula I are obvious over the guanidine compounds taught by Usui." (*Id.*) In response, Applicant has cancelled the term "methyl" from the formula of claim 11. Applicant submits that the presently amended claims do not include homologues to the

unsubstituted compounds of Usui. Accordingly, the rejection of claims 11, 13–14, and 22–23 as being obvious over Usui is improper and must be withdrawn.

New claims 27–31 are presented which recite the formula (I) "wherein . . . at least one of the carbon atoms of A is substituted by one or more methyl groups . . . . " Presumably, the Examiner will consider new claims are *prima facie* obvious over Usui as the new claims encompass at least mono-methyl substituted compounds. In response, Applicant submits that the present invention is nevertheless nonobvious over the compounds of Usui due to the unexpected NPFF receptor binding activity achieved by the present invention. Applicant submits herewith the Declaration of Dr. Markus A. Riederer, which includes comparative data showing unsubstituted N-(4,5,6,7-tetrahydro-benzothiazole-2-yl)-guanidine (the compound allegedly disclosed by Usui) has an IC_{50} of 210, which is "significantly lower" than that of methyl-substituted compounds:

Table 2

Example No	Name	IC_{50} [nM]	Structure
C-15	N-(4,5,6,7-tetrahydro-benzothiazole-2-yl)-guanidine	210	
C-25	N-(4-methyl-4,5,6,7-tetrahydro-benzothiazole-2-yl)-guanidine formate	40	
C-02	N-(5-methyl-4,5,6,7-tetrahydro-benzothiazole-2-yl)-guanidine	6	
C-10	N-(6-methyl 4,5,6,7-tetrahydro-benzothiazole-2-yl)-guanidine	62	

C-71	N-(7-methyl-4,5,6,7-tetrahydro-benzothiazol-2-yl)- guanidine formate	12	

Prima facie obviousness based on structural similarity is based on the expectation that similar compounds will have similar properties. The NPFF receptor binding activity data establish that the compounds of claims 27–31 exhibit a much higher activity than the unsubstituted compound N-(4,5,6,7-tetrahydro-benzothiazole-2-yl)-guanidine. Applicant was the first to disclose the claimed compounds which unexpectedly exhibit enhanced NPFF receptor binding activity. Accordingly, the rejection of claims 27–31 as being obvious over Usui is improper and must be withdrawn.

Claim Objections

Claims 12 and 15–16 stand rejected as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any interviewing claims. Applicant thanks the Examiner for the early indication of allowable subject matter, but notes that pending claims 11–16 and 22–31 should all be in condition for allowance for the reasons discussed above.

CONCLUSION

In view of the above remarks, early notification of a favorable consideration is respectfully requested. An indication of allowance of all claims is respectfully requested. It is believed that no additional fees are required for entry of these remarks, but should any additional fees be necessary to enter this response, the USPTO is authorized to charge such fees to Deposit Account No. 50-0206.

Respectfully submitted,

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